

**CLAIMS**

1. High purity phosphoric acid having an Sb content of 200 ppb or less and a sulfide ion content of 200 ppb or less as impurity contents on a 85 weight percent  $\text{H}_3\text{PO}_4$  basis.
- 5 2. The high purity phosphoric acid according to claim 1, obtained by a first step of blowing hydrogen sulfide gas in excess into crude phosphoric acid containing an impurity metal to precipitate the impurity metal in the form of a sulfide, a second step of filtering the phosphoric acid from the first step, and a third step of bringing the phosphoric acid from the second step into contact with air in a removal tower to remove  
10 hydrogen sulfide gas from the phosphoric acid, the first and the second steps being carried out at 59°C or lower.
3. The high purity phosphoric acid according to claim 1 or 2, wherein the crude phosphoric acid is dry-process phosphoric acid obtained by burning yellow phosphorus to generate diphosphorus pentoxide gas and hydrating the gas.
- 15 4. The high purity phosphoric acid according to any one of claims 1 to 3, which is for use in etching of an electronic device.
5. A process of producing high purity phosphoric acid comprising a first step of blowing hydrogen sulfide gas in excess into crude phosphoric acid containing an impurity metal to precipitate the impurity metal in the form of a sulfide, a second step of  
20 filtering the phosphoric acid from the first step, and a third step of bringing the phosphoric acid from the second step into contact with air in a removal tower to remove hydrogen sulfide gas from the phosphoric acid, the first and the second steps being carried out at 59°C or lower.
6. The process of producing high purity phosphoric acid according to claim 5,  
25 further comprising the step of aging between the first and the second steps.
7. The process of producing high purity phosphoric acid according to claim 5 or

6, wherein the first step is carried out by bringing the crude phosphoric acid and the hydrogen sulfide gas into contact with each other in an absorption tower packed with a packing.

5        8.        The process of producing high purity phosphoric acid according to any one of claims 5 to 7, wherein the third step is carried out by bringing the phosphoric acid and air into contact in a removal tower packed with a packing.

10       9.        The process of producing high purity phosphoric acid according to any one of claims 5 to 8, wherein the crude phosphoric acid containing an impurity metal is dry-process phosphoric acid obtained by burning yellow phosphorus to generate diphosphorus pentoxide gas and hydrating the gas.